

What is claimed is:

1. A vibration isolation table comprising:

a stationary housing having an opening on a top surface thereof;

5 a pressure-tight flexible member which closes said opening to form a first pressure chamber in said stationary housing;

a primary movable base which is coupled to a central portion of said pressure-tight flexible member,  
10 said primary movable base having a bottomed hollow cylindrical member which is provided at a center of said primary movable base and extends downwards to be positioned in said first pressure chamber, an upper end of said bottomed hollow cylindrical member being formed  
15 as an open end;

an intermediate movable base having a swingable rod which is inserted into said bottomed hollow cylindrical member so that a bottom end of said swingable rod is supported by a bottom of said bottomed hollow  
20 cylindrical member in a manner to allow said swingable rod to swing with respect to said bottomed hollow cylindrical member; and

a vibration-free base on which an object to be isolated from vibration is mounted, a second pressure  
25 chamber being formed between said intermediate movable

base and said vibration-free base, said second pressure chamber being capable of expanding and contracting vertically.

2. The vibration isolation table according to claim 1, wherein said pressure-tight flexible member comprises a rolling diaphragm.

3. The vibration isolation table according to claim 1, further comprising a bellows which surrounds said second pressure chamber to form said second pressure chamber inside said bellows.

4. The vibration isolation table according to claim 1, wherein respective air pressures in said first pressure chamber and said second pressure chamber are controlled so as to become the same as each other.

5. The vibration isolation table according to claim 3, wherein said intermediate movable base comprises a flat plate which is formed integral with an upper end of said swingable rod so that an axis of said swingable rod extends orthogonal to said flat plate, and wherein said second pressure chamber is formed between said vibration-free base and said flat plate.

6. The vibration isolation table according to claim 1, wherein said primary movable base and said intermediate movable base constitute a gimbal piston.

7. The vibration isolation table according to

claim 5, further comprising a bellows-fixing under plate which has the same shape as said vibration-free base and is fixed to an upper surface of said flat plate,

wherein an upper peripheral edge and a lower  
5 peripheral edge of said bellows are fixed to said vibration-free base and said bellows-fixing under plate, respectively.